REMARKS

Claims 1, 11, 23, 24, 26, 36, 48, 49, 51, 61, 73 and 74 have been amended.

Claims 76 - 87 have been canceled without prejudice or disclaimer of the subject matter thereof.

Claims 1 - 75 are present in the subject application.

In the Office Action dated October 2, 2002, the Examiner has rejected claims 1 - 87 under 35 U.S.C. §103(a). Favorable reconsideration of the subject application is respectfully requested in view of the following remarks.

The Examiner has rejected claims 1 - 87 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,557,722 (DeRose et al). Briefly, the DeRose et al patent discloses a data processing system and method for generating a representation of an electronic document, for indexing the electronic document, for navigating the electronic document, using its representation and for displaying the electronic document on an output device. The system and method are used with electronic documents having descriptive markup which describes the content or meaning of the document rather than its appearance. Each markup element defines a node or element in a tree, where the tree is represented by providing a unique identifier for each element and for accessing a descriptor of the element. The element descriptor preferably includes indications of the parent, first child, last child, left sibling, right sibling, type name and text location for the element. The document representation is used to facilitate navigation of the text for constructing navigational aids, such as table of contents, and full text indexing.

In contrast, the present invention is directed toward a web-based system for storing content objects in a data repository as a group of hierarchically related content entities. Each non-container content object is preferably stored as a separate entity in the data repository. As

content objects are input into the system or as a user selects desired objects for inclusion in a content object, the system arranges the content objects hierarchically according to the order specified by the input content object or by the user. The system then creates a file object defining the content object that contains a list or outline of the container and non-container entities selected, their identifiers, order and structure. This file object is stored separately in the data repository.

Accordingly, independent claims 1, 11, 23, 24, 26, 36, 48, 49, 51, 61, 73 and 74 have been amended to include the subject matter of dependent claims 76 – 87. The language of claims 76 – 87 has been slightly modified within the independent claims to further clarify the subject matter. In particular, the independent claims recite the features of the list or outline being manipulable by a user to alter the content of the content object.

The Examiner takes the position that the DeRose et al patent teaches a method for indexing and rendering electronic documents, especially electronic books. The book as a content object has a plurality of elements. An element directory consists of an array of element descriptors, each as a content entity representing an element of the document as the content object. The element directory is created as a file object by an indexing process in the mass storage device. The Examiner further alleges that the DeRose et al patent does not explicitly teach storing ones of the content entities as a plurality of individually accessible file objects each containing one content entity, but that the patent discloses utilization of pointers within the element descriptors to reference a particular text chunk in an open text file. The Examiner takes the further position that it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the DeRose et al process to include the above-discussed features lacking in that patent's disclosure in order to format electronic documents, such as an

electronic book, in accordance with its contents. With respect to the subject matter of dependent claims 76 – 87, the Examiner takes the position that this subject matter is disclosed by the DeRose et al patent section describing rendering of a document.

This rejection is respectfully traversed since the DeRose et at patent does not disclose, teach or suggest the features recited in the independent claims of the list or outline being manipulable by a user to alter the content of the content object. Rather, the DeRose et al patent discloses that the element directory, which the Examiner construes as the list or outline, is generated from an electronic document markup file indicating the document content (See Column 5, lines 46 - 58; Column 9, lines 10 - 20; and Column 12, lines 51 - 58). The element directory does not facilitate control or alteration of document content as recited in the claims, but rather provides a fixed representation of document content for navigation, display and indexing purposes.

Although the Examiner cites the patent section describing rendering of a document to disclose the claimed content altering features, the rendering process relates to display of a document rather than to alteration of document content as recited in the claims. In fact, the DeRose et al patent specifically defines rendering as displaying formatted text of a document to an output device using the element directory (See Column 15, line 64 to Column 16, line 3) and further indicates that a document is rendered without modifying the document or its internal representation (See Column 17, line 48). Thus, the DeRose et al patent discloses the system to display the document without content modification, as opposed to a user manipulating the list or outline to alter content of a content object as recited in the claims. Since the DeRose et al patent does not disclose, teach or suggest, the features recited in independent claims 1, 11, 23, 24, 26, 36, 48, 49, 51, 61, 73 and 74 as discussed above, these claims are considered to be in condition

for allowance.

Claims 2 - 10, 12 - 22, 25, 27 - 35, 37 - 47, 50, 52 – 60, 62 – 72 and 75 depend, either directly or indirectly, from independent claims 1, 11, 24, 26, 36, 49, 51, 61 and 74, respectively, and include all of the limitations of their parent claims. The dependent claims are considered to be in condition for allowance for substantially the same reasons discussed above in relation to their parent claims and for further limitations recited in these claims.

In addition to the foregoing, it would not be obvious to modify the DeRose et al patent to attain the claimed invention. Specifically, this patent is directed to the rendering of an electronic document for display without modification of document content as discussed above. The content of the document is indicated in a markup file, while the element directory is a fixed representation of the document content. In contrast, the present invention is directed toward a web-based system enabling creation of content objects by manipulating lists or outlines of content entity identifiers to alter content within the content object. Since the DeRose et al patent is concerned with display of documents, the patent is not directed toward content object creation and editing. Thus, there is no reason, suggestion or motivation to modify the patent in a manner contrary to its specification to achieve the claimed invention. Thus, the DeRose et al patent does not render the claimed invention obvious.

The application, having been shown to overcome issues raised in the Office Action, is considered to be in condition for allowance and Notice of Allowance is earnestly solicited.

Respectfully submitted,

Stuart B. Shapiro

Stuart B. Shapiro
Reg. No. 40,169

EDELL, SHAPIRO, FINNAN & LYTLE, LLC
1901 Research Blvd., Suite 400
Rockville, Maryland 20850-3164
(301) 424-3640
Hand-delivered on: 10/31/02

APPENDIX

The following are the amended claims with markings to show the changes made, where brackets ('[ ]') indicate removed text and underlining indicates additional text.

--1. (Twice Amended) A method for storing at least one content object including a plurality of content entities in a data repository, comprising the steps of:

for each content object,

storing as a file object within the data repository a list of content entity identifiers indicating the content entities within the content object, wherein the list is manipulable by a user to alter the content of the content object, and

storing ones of the plurality of content entities within the data repository as a plurality of individually accessible file objects, wherein each file object contains one content entity.

11. (Twice Amended) A method for storing at least one hierarchically structured content object having a plurality of content entities in a data repository, comprising the steps of:

for each content object,

storing as a file object within the data repository an outline of containers and content entity identifiers defining the content and hierarchy of the content object, wherein the outline is manipulable by a user to alter the content of the content object, and

storing ones of the plurality of content entities within the data repository as a plurality of individually accessible file objects, wherein each file object contains one content entity.

23. (Twice Amended) A method for retrieving a content object from a data repository, the content object being stored within the data repository as a file object containing an ordered list of content entity identifiers indicating the content entities within the content object, comprising the steps of:

retrieving the file object containing the list of content entity identifiers, wherein each content entity is stored as an individually accessible file object within the data repository;

for each content entity identifier, retrieving the individually accessible file object corresponding to the identified content entity; and

inserting the content entity into the ordered list at the location of its content entity identifier, wherein the list is manipulable by a user to alter the content of the content object.

24. (Twice Amended) A method for constructing a content object, the contents of the content object being defined by an ordered list of content entity identifiers identifying one or more content entities each stored in a data repository as an individually accessible file object, comprising the steps of:

for each content entity identifier, retrieving the individually accessible file object corresponding to the identified content entity; and

inserting the content entity into the ordered list at the location of its content entity identifier, wherein the ordered list is manipulable by a user to alter the content of the content object.

26. (Twice Amended) A program storage device readable by a machine, tangibly

embodying a program of instructions executable by the machine to perform method steps for storing at least one content object including a plurality of content entities in a data repository, the method steps comprising:

for each content object,

storing as a file object within the data repository a list of content entity identifiers indicating the content entities within the content object, wherein the list is manipulable by a user to alter the content of the content object, and

storing ones of the plurality of content entities within the data repository as a plurality of individually accessible file objects, wherein each file object contains one content entity.

36. (Twice Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for storing at least one hierarchically structured content object including a plurality of content entities in a data repository, the method steps comprising:

for each content object,

storing as a file object within the data repository an outline of containers and content entity identifiers defining the content and hierarchy of the content object, wherein the outline is manipulable by a user to alter the content of the content object, and

storing ones of the plurality of content entities within the data repository as a plurality of individually accessible file objects, wherein each file object contains one content entity.

48. (Twice Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for retrieving a content object from a data repository, the content object being stored within the data repository as a file object containing an ordered list of content entity identifiers indicating the content entities within the content object, the method steps comprising:

retrieving the file object containing the list of content entity identifiers, wherein each content entity is stored as an individually accessible file object within the data repository;

for each content entity identifier, retrieving the individually accessible file object corresponding to the identified content entity; and

inserting the content entity into the ordered list at the location of its content entity identifier, wherein the list is manipulable by a user to alter the content of the content object.

49. (Twice Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for constructing a content object, the contents of the content object being defined by an ordered list of content entity identifiers identifying one or more content entities each stored in a data repository as an individually accessible file object, the method steps comprising:

for each content entity identifier, retrieving the individually accessible file object corresponding to the identified content entity; and

inserting the content entity into the ordered list at the location of its content entity identifier, wherein the ordered list is manipulable by a user to alter the content of the content object.

51. (Twice Amended) A system for storing at least one content object including a plurality of content entities in a data repository, comprising:

means for storing, as a file object within the data repository, a list of content entity identifiers indicating the content entities within the content object, wherein the list is manipulable by a user to alter the content of the content object, and

means for storing ones of the plurality of content entities within the data repository as a plurality of individually accessible file objects, wherein each file object contains one content entity.

61. (Twice Amended) A system for storing at least one hierarchically structured content object including a plurality of content entities in a data repository, comprising:

means for storing an outline of containers and content entity identifiers for each content object, the outline being stored as a file object within the data repository and defining the content and hierarchy of the content object, wherein the outline is manipulable by a user to alter the content of the content object, and

means for storing ones of the plurality of content entities within the data repository as a plurality of individually accessible file objects, wherein each file object contains one content entity.

73. (Twice Amended) A system for retrieving a content object from a data repository, the content object being stored within the data repository as a file object containing an ordered list of content entity identifiers indicating the content entities within the content object, comprising:

means for retrieving the file object containing the list of content entity identifiers,

wherein each content entity is stored as an individually accessible file object within the data repository;

means for retrieving the individually accessible file object corresponding to each content entity identifier; and

means for inserting the content entity into the ordered list at the location of its content entity identifier, wherein the list is manipulable by a user to alter the content of the content object.

74. (Twice Amended) A system for constructing a content object, the contents of the content object being defined by an ordered list of content entity identifiers identifying one or more content entities each stored in a data repository as an individually accessible file object, comprising:

means for retrieving the individually accessible file object corresponding to each content entity identifier; and

means for inserting the content entity into the ordered list at the location of its content entity identifier, wherein the ordered list is manipulable by a user to alter the content of the content object.--